Dinosaurs. Along with these proportions we may well expect to find a correspondingly shorter neck and perhaps an animal fitted for arboreal food habits. Such a short-necked type was long since suggested by Marsh in his *Apatosaurus laticollis.**

In a future publication of the Field Columbian Museum a complete description of this most interesting Dinosaur will be given.

ELMER S. RIGGS.

FIELD COLUMBIAN MUSEUM,
March 16, 1901.

A RECENT FAULT-SLIP, OGDEN CANYON, UTAH.

IT is generally known that the western face of the Wasatch range, Utah, is determined by a profound fault, and that numerous minor faults are observable at the base of the range. At the mouth of Ogden canyon these secondary faults are particularly plain. Recently there occurred at the locality named a very slight slip along one of the minor fault planes. The movement opened a crack in a mass of gneiss through which a tunnel has been cut as a part of the conduit pertaining to the Ogden Power and Light Company's generating plant. The tunnel walls were fractured, a crack averaging one and a half inches appearing on the inside. The escaping water found outlets on the mountain side at depths of from fifty to a hundred and fifty feet below the tunnel floor, and in its course it carried down many tons of boulders and debris. A steel bridge over the Ogden river was completely destroyed. The disturbance was strictly local, and apparently was due to the escape of water from the tunnel down the plane of faulting, thus constituting a column which by hydrostatic pressure further shifted the block. As to expansion through freezing being the probable cause, there is none but negative evidence. Repairs are in progress. These consist in the removal of the upper part of the shifted block, and in carrying a wooden pipe line through the tunnel.

It appears that the water was first seen issuing from the side of the mountain below the tunnel within a few days after the occurrence of a slight earth-tremor in the vicinity. In the loose alluvial deposits along the mountain front on the north of the canyon mouth, cracks and subsequent settlings have appeared.

J. E. TALMAGE.

* *Amer. Jour Sci.*, Vol XVII., p. 87.

QUOTATIONS.

THE U. S. NAVAL OBSERVATORY.

THE Secretary of the Navy has temporarily ended the Naval Observatory troubles, without the aid of a court of inquiry or court-martial, by detaching Professor Stimson J. Brown from the institution. * * * It would seem from this that Secretary Long shares with Capt. Davis, the superintendent of the Observatory, the belief that Professor Brown transgressed the naval regulations in his efforts to have Congress pass the legislation needed to make the institution a great national one, and not a mere adjunct to the navy. As Capt. Davis's tour of shore duty expires before long, a new superintendent may be looked for within six months, and peace in the Observatory may be expected until the new superintendent and new director of astronomy come to a parting of the ways. Meanwhile, scientists all over the country are being urged to come to the rescue of the Observatory by bringing pressure to bear upon Congress. A bill which met the approval of SCIENCE was introduced in the Senate in the last session by Senator Morgan. It provided for the nationalization of the Observatory and for the appointment as director of an eminent astronomer, 'to be selected from the astronomers of the National Academy of Sciences, unless in the judgment of the President one of higher scientific and executive qualifications be found.' Friends of the institution should see to it that a similar bill is introduced at the opening of the next Congress and vigorously pushed to passage.—The N. Y. *Evening Post.*

POLITICS AND STATE UNIVERSITIES.

To form a just conception of the working of the State university, we should go to the older States of the Central West, where State universities have long been in existence, and where they have had time to shape, in a measure at least, public opinion on university education. In this part of the country the four most conspicuous and liberally supported State universities are those of Michigan, Illinois, Wisconsin

and Minnesota. In these States the tenure of the university president compares very favorably with that of any other class of educational institutions in any part of the country. Among the conspicuous college presidents of the United States, President Angell stands next in seniority to President Eliot, of Harvard. The presidents of these four State universities have served terms varying from seven to thirty years, and averaging over fifteen years. The significance of this long tenure of office is apparent, if we recall the uncertain and fluctuating fortunes of the two great political parties in these Northwestern States during the last ten years.

A particularly striking instance of the development of public opinion against political interference may be found in Illinois. In the year 1894 the State University was subject to the management of a Board of Trustees, consisting of nine elective and three *ex-officio* members. Of the nine elective members of the Board, six were Democrats, as were also at least two of the three *ex-officio* members. One of these two, a member in fact as well as in name, was Governor John P. Altgeld, the vigor of whose partisanship no one will question. In spite of this decisive Democratic majority in the Board of Trustees, that body elected as the new president of the University a gentleman who was well known as a member of the opposite political party, and who had held, a few years before, a conspicuous and responsible position in the party councils of another State. * * *

The freedom of university teaching will probably always stand in need of jealous defenders. No human institution can secure itself absolutely against all influences in restraint of truth, some of which are none the less serious because they are not of a kind to attract public attention. Yet, all things considered, the State universities of the Central West may fairly claim to have made a good stand for non-partisan treatment of university teaching.—*The Independent*, N. Y.

CURRENT NOTES ON PHYSIOGRAPHY.

SNAKE RIVER CANYON.

SOME brief account of the great canyon of Snake river is presented by W. Lindgren (The gold and silver veins of Silver city, de Lamar and other mining districts in Idaho, '20th Annual Report, U. S. Geological Survey,' 1900, pt. 3, 65–256, numerous plates and figures), supplementing the description given a few years ago by Russell (U. S. Geological Survey, Water-Supply and Irrigation Paper, No. 4, 1897). Where the river forms the western boundary of Idaho, the lava plateau has an elevation of from 6,000 to 7,000 feet; its successive flows, revealed in the dark brown canyon walls, are from 20 to 150 feet thick. Hereabouts, the river has cut down into the pre-lava mountains, the contact revealing a buried surface of strong relief. The canyon walls for a depth of 2,500 feet are benched on the horizontal lava beds; a remaining depth of the same amount is steeply buttressed with porphyries and diorites. "The bottom of the old valleys clearly lie far below the deep cut of Snake river, how far is not known. * * * It may be confidently advanced as a working hypothesis that this whole district * * * far from having been elevated since the Tertiary era * * * represents an area of depression, standing now at lower levels than during the Miocene period" (93).

ALPINE MORPHOLOGY.

A MONOGRAPH of unusual interest and value is found in E. Richter's 'Geomorphologische Untersuchungen in den Hochalpen' (*Pet. Mitt.*, Erg'heft 132, 1900, 103 p., 6 pl., 14 fig.).

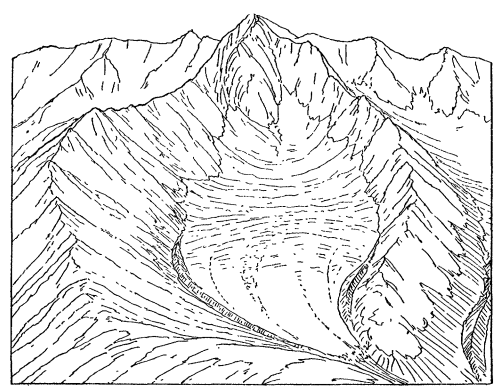

FIG. 1.—A corry beneath a sharp peak with serrate spurs.

It is concerned particularly with the origin of Kahre (cirques, corries, botner), which consti-